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DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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February 26, 2001

CERTIFIED RETURN RECEIPT
7000 0520 0021 7582 8548

O. Jay Gatten, Consultant
Basin Perlite Company
P.O. Box 490
Milford, Utah 84751

Re: Initial Review, Notice of Intention to Revise Mining Operations, Basin Perlite Mining Company, Pearl Queen Mine, M/001/027, Beaver County, Utah

Dear Mr. Gatten:

The Division has completed a review of your draft Notice of Intention to Revise Mining Operations for the Pearl Queen Mine, located in Beaver County, Utah, which was received December 6, 2000. After reviewing the information, the Division has the following comments which will need to be addressed before tentative approval may be granted. The comments are listed below under the applicable Minerals Rule heading. Please format your response in a similar fashion. If possible, please provide a response to this review by March 30, 2001.

The Division will suspend further review of the Pearl Queen mine plan revision until your response to this letter is received. If you have any questions in this regard please contact me, Lynn Kunzler, Tom Munson or Doug Jensen of the Minerals Staff. If you wish to arrange a meeting to sit down and discuss this review, please contact us at your earliest convenience. Thank you for your cooperation in completing this permitting action.

Sincerely,

D. Wayne Hedberg

D. Wayne Hedberg
Permit Supervisor
Minerals Regulatory Program

jb
Attachment: Technical Review
cc: William R. Wilson, Basin Perlite Co.
Tom Munson, OGM
M01-27-3rd-rvw

0001

INITIAL REVIEW OF NOTICE OF INTENTION TO REVISE MINING OPERATIONS

Basin Perlite Company
Pearl Queen Mine - M/001/027
February 23, 2001

R647-4-105 - Maps, Drawings & Photographs

105.1 Topographic base map, boundaries, pre-act disturbance

The GPS based 1"= 400' topographic map indicates that the outlined area of pit 3 encompasses 4.86 acres, the map enclosed with the notice includes the same outline but the notice states that area to be mined will only be 4.5 acres. Please explain which figure is correct. (DJ)

105.3 Drawings or Cross Sections (slopes, roads, pads, etc.)

Please provide cross-sections of both pit areas showing the present ground surface, the surface after mining and after final reclamation. Please provide north-south & east-west cross-sections through each pit area. These cross-sections should be drawn to scale (1"=100' or larger). These cross-sections are necessary for surety calculation purposes. (DJ)

Please provide typical profile cross-sections of the two mine roads to be reclaimed after mining showing surface before and after reclamation. (DJ)

Please provide a reclamation treatments map indicating specific reclamation activities that will take place during final reclamation of the site. (DJ)

R647-4-106 - Operation Plan

106.2 Type of operations conducted, mining method, processing etc.

Please provide a narrative of the mining operations and the equipment that will be used. (DJ)

106.3 Estimated acreages disturbed, reclaimed, annually.

Please include a map showing the proposed mining sequence on an annual basis and the proposed annual disturbance for the first five years. (DJ)

The original plan indicated that the amount of disturbance at the site would be kept to a minimum by performing concurrent reclamation of portions of the previous years disturbance. Will concurrent reclamation of the site be incorporated into this plan? If so, please show on a map areas that will be reclaimed during the next 5-year period. (DJ)

106.5 Existing soil types, location, amount

Apparently soil material was scraped off from the Pit 3 area. Please provide the following soils information: Volume of material removed, protection measures being employed to protect stockpiled topsoil, location of stockpile(s) (show locations on a map), texture, pH, EC (conductivity), SAR, percent Organic Matter, CEC (cation exchange capacity), total nitrogen, nitrate nitrogen, phosphorus (as P_2O_5), and potassium (as K_2O). *Please note, a sample of the soil material will need to be submitted to a soils lab for analysis.* (LK)

106.7 Existing vegetation - species and amount

Please provide the results of a vegetation survey for the Pit 3 area. The survey needs to include, at a minimum, a list of species present and the percent ground cover of vegetation (aerial projection). If the vegetation on the Pit 3 area is the same as Pit 1 (previously approved mine area), then additional vegetation surveys would not be needed. However, you will need to confirm that the vegetation is the same. (LK)

106.9 Location & size of ore, waste, tailings, ponds

Please indicate where the overburden and plant tailings will be stored when the present pit is expanded. Will the present waste storage area be expanded to accommodate the additional tonnage? (DJ)

Please indicate where the waste will be stored when Pit 3 is mined. Please indicate on the topographic map where this material will be placed. If the waste will be placed outside the present mine plan areas, please adjust the affected acreage and modify the reclamation plan to include this area. (DJ)

R647-4-107 - Operation Practices

107.1 Public safety & welfare

107.1.14 Posting warning signs

Warning signs will need to be placed along the road leading to the entrance of each pit/mine site area. (DJ)

107.1.15 Constructing berms, fences, etc. above highwalls

The isopach map included in the initial plan indicates that the bottom of the perlite bed in the present pit area will be approximately 80 to 90 feet deep when the pit reaches the eastern pit limits. If the perlite is mined to the bottom of the bed as indicated in the plan, this will create an 80 to 90 foot highwall. What safety measures are planned to protect the public from this hazard? (DJ)

107.5 Suitable soils removed & stored

See comments under R647-4-106.5. (LK)

R647-4-109 - Impact Assessment

109.4 Slope stability, erosion control, air quality, safety

If highwalls are created during mining, please explain what measures will be taken to stabilize these features. (DJ)

109.5 Actions to mitigate any impacts

The topographic map included in the plan indicates that the waste dump located in the present mine area is impacting the drainage north of the pit. What measures will be taken to reclaim and/or restore the drainage configuration in this area upon closure? (DJ)

R647-4-110 - Reclamation Plan

110.2 Roads, highwalls, slopes, drainages, pits, etc., reclaimed

Please indicate how the highwalls created by this mining will be reclaimed. (DJ)

The plan indicates that the road leading to Pit 3 will be upgraded. If the road is widened, the road will need to be reclaimed back to the original width at the end of the mine life. Please indicate what amount of this road is side-cast. Please be aware that road widths are dictated by the amount of area affected by the feature (top of cut to bottom of fill), not the useable surface width of the road (side-cast roads affect much more area than roads built on flat surfaces). (DJ)

110.5 Revegetation planting program

It may be necessary to fertilize or otherwise amend soils for reclamation. The type(s) and amount(s) of fertilizer and/or other soil amendments cannot be determined until the soil analysis has been submitted. (LK)

R647-4-111 - Reclamation Practices

111.1 Public safety & welfare

1.15 Constructing berms/fences above highwalls

If highwalls exist after final reclamation, berms or fences will need to be constructed in these areas to warn and protect the public from these physical hazards. (DJ)

111.2 Reclamation of natural channels

If reconstruction of the drainage located north of the present pit area below the waste dump is contemplated, then reconstruction costs should be included in the surety calculations. (DJ)

111.3 Erosion & sediment control

If the drainage to the North of the present pit is filled in, then it is appropriate that the outslope of this waste pile be stabilized such that erosion potential is minimized. A description of its final configuration should be included for review of stability. Surface roughness and slope breaks are appropriate forms of erosion control and need to be incorporated into the plan. (TM)

111.6 All slopes regraded to stable configuration

Please provide a description of the reclamation efforts that will take place on the waste dumps to establish a stable slope upon mine closure. (DJ)

111.7 Highwalls stabilized at 45 degrees or less

Please provide a plan for stabilization of any remaining highwalls, should this become necessary upon closure. (DJ)

R647-4-112 - Variance

No variances were requested for this plan. (DJ)

R647-4-113 - Surety

Surety cannot be calculated until the technical deficiencies as outlined in this review are addressed. The operator has mentioned that a contractor will be used to perform this activity. Third party costs submitted at the time of the review will be utilized in conjunction to Division generated costs to calculate the required reclamation surety amount for this plan. (DJ)